

This resource assessment is designed to gather and display information specific to Davis County, Utah. This report will highlight the natural and social resources present in the county, detail specific concerns, and be used to aid in resource planning and target conservation assistance needs. This document is dynamic and will be updated as additional information is available through a multi-agency partnership effort. The general observations and summaries are listed first, followed by the specific resource inventories.

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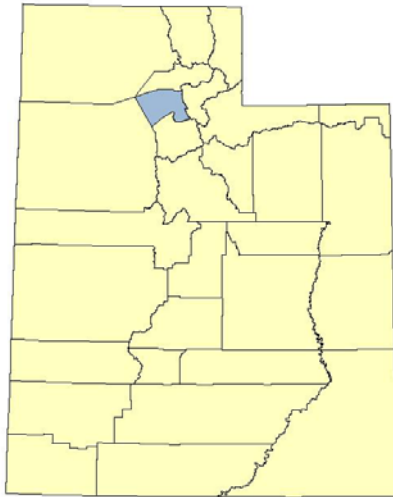
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Introduction

Davis County is located between Salt Lake and Weber counties in the heart of the Salt Lake/Ogden metropolitan area. This central location provides unparalleled access to the Salt Lake International Airport, Hill Air Force Base, Antelope Island and the Great Salt Lake and other cultural, retail, commercial, entertainment and recreational opportunities within Davis County's 15 cities.

Davis County consists of 630 square miles and has the smallest land area of the 29 Utah counties. Only 223 square miles is actual usable land. Antelope Island adds another 42 square miles to the land area. The remainder is part of the Great Salt Lake.

Average low winter temperatures: 20.6 degrees; average high summer temperatures: 92.8 degrees; average precipitation: 18.71 inches.

Equal Opportunity Providers and Employers.



General Land Use Observations

Grass / Pasture / Hay Lands

- Complications related to overgrazing include poor pasture condition, soil compaction and water quality issues.
- Control of noxious and invasive plants is an ever increasing problem.
- The small, part-time farms are less likely to adopt conservation due to cost and low farm income.

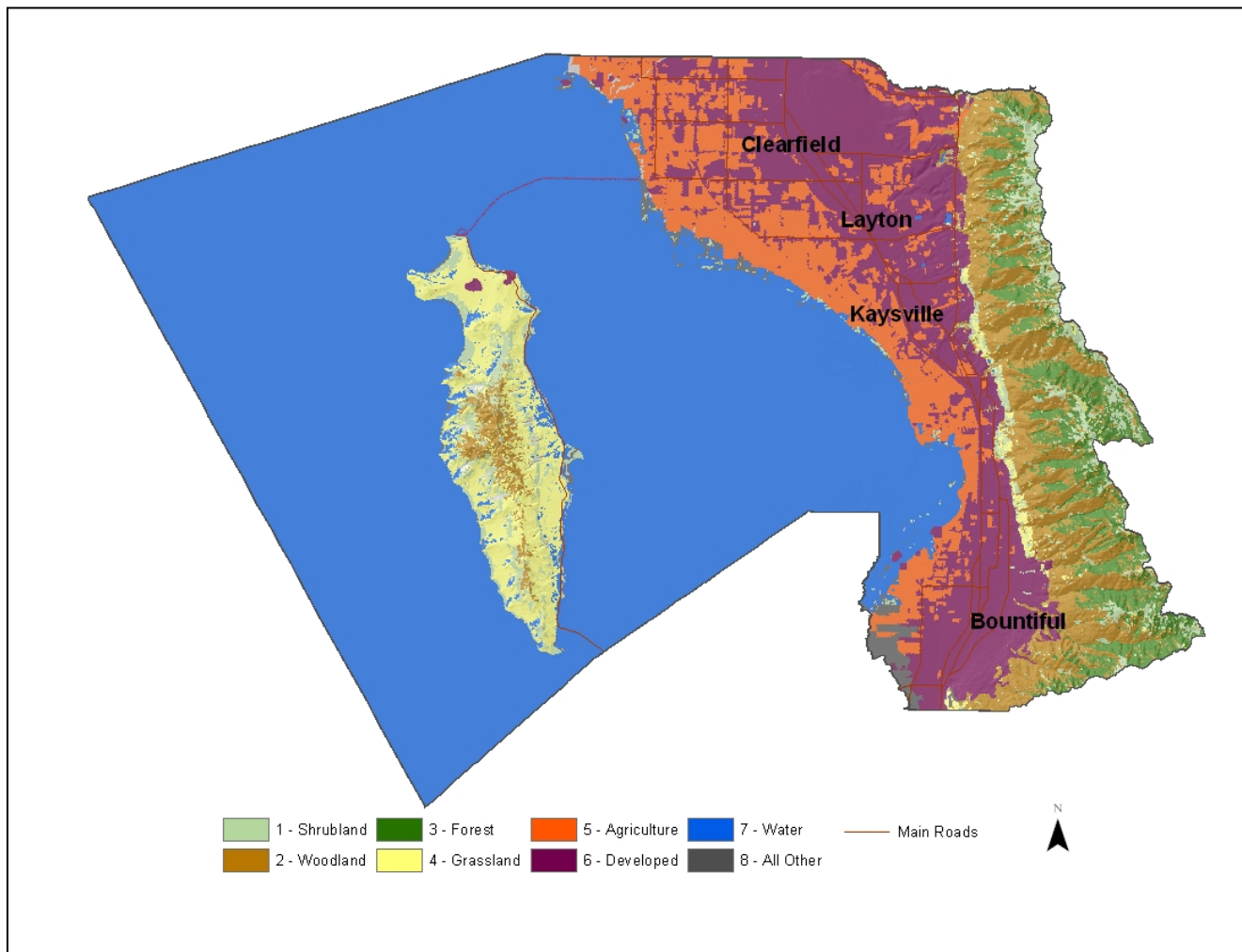
Row & Perennial (orchards / vineyards / nurseries) Crops

- Residue, nutrient and pest management are needed to control erosion and to protect water quality.
- The small, part-time farms are less likely to adopt conservation due to cost and low farm income.

Resource Assessment Summary

Categories	Concern high, medium, or low	Description and Specific Location (quantify where possible)
Soil	Med	On fine sandy loams when in onions. 300 ac.
Water Quantity	High	On low water years production is severely restricted
Water Quality Ground Water	Low	Acquifer levels are dropping
Water Quality Surface Water	High	Any and all contaminants are a concern
Air Quality	Med	Visibility and particulates during inversions.
Plant Suitability	High	Mostly range and pasture in poor condition. 2,000 acres
Plant Condition	High	Mostly range and pasture in poor condition. 4,000 acres
Fish and Wildlife	Med	T&E species and state sensitive species.
Domestic Animals	Med	West Nile Virus. Mad Cow disease
Social and Economic	Med	Maintain it as a family farm.

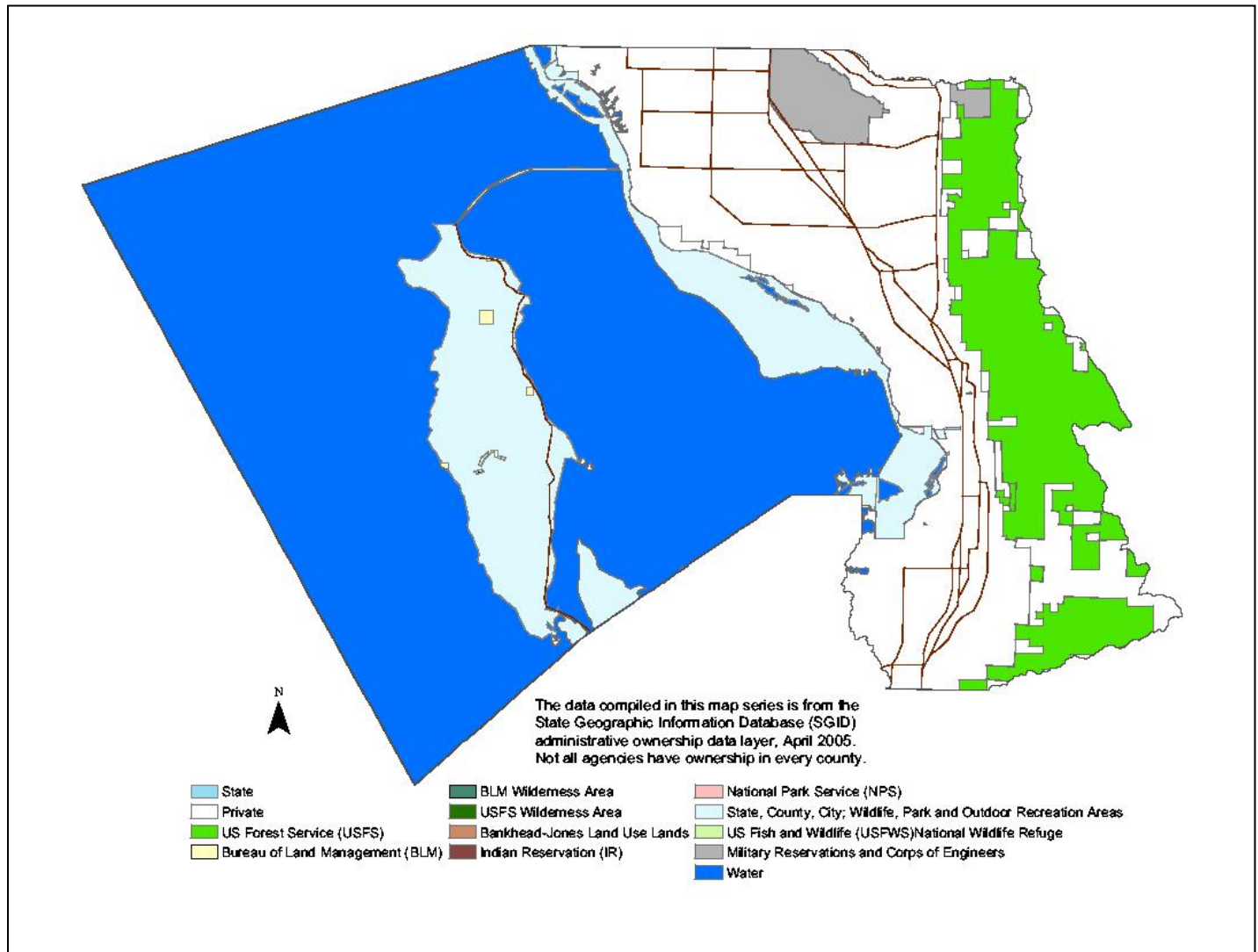
Land Cover



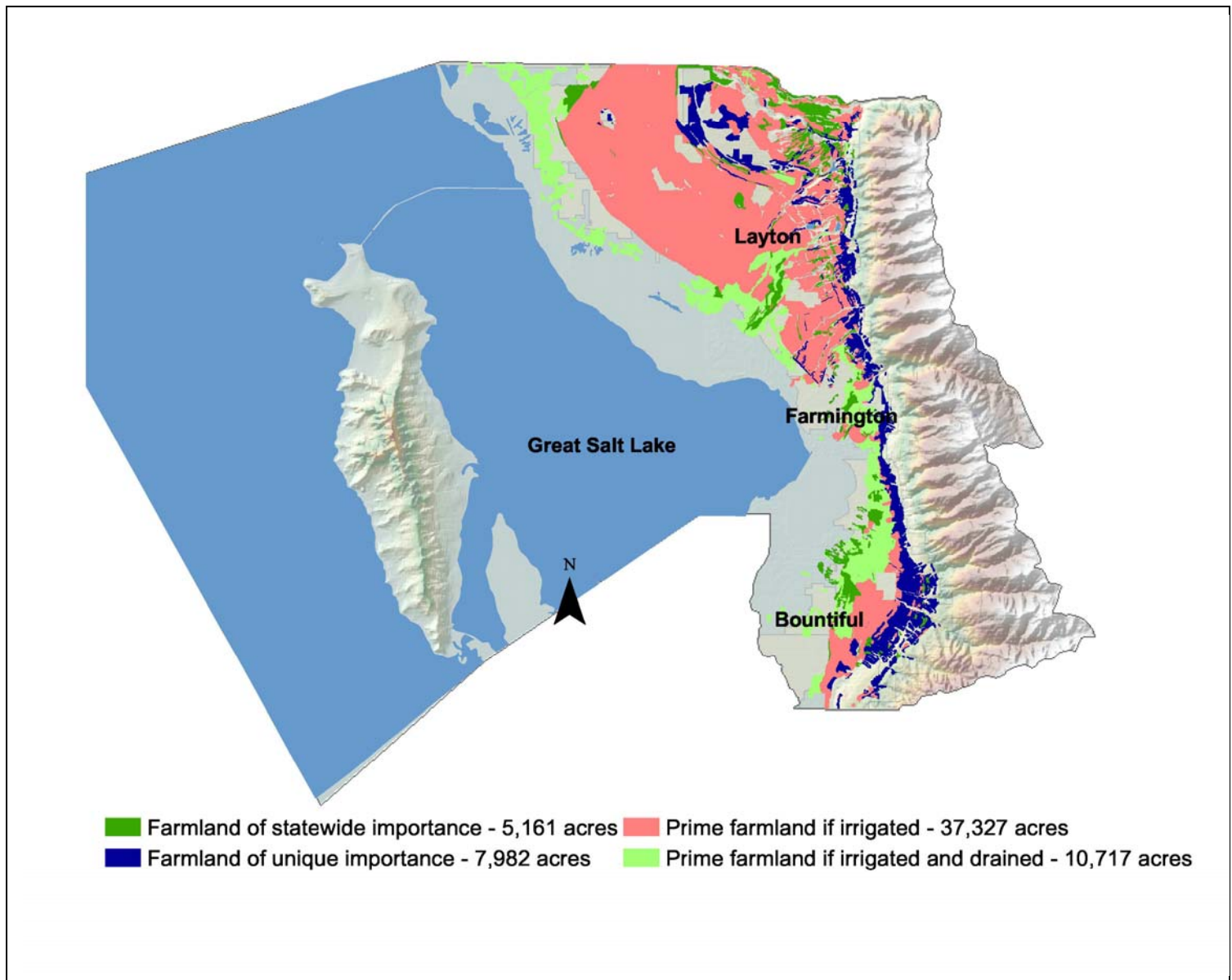
Land Cover/Land Use		
	Acres	%
Forest		0%
Grain Crops	6,000	2%
Conservation Reserve Program <i>*a</i>		0%
Grass/Pasture/Haylands	10,000	3%
Orchards/Vineyards	300	0%
Row Crops	1,000	0%
Shrub/Rangelands	50,000	15%
Water	215,000	64%
Wetlands	5,000	1%
Developed	47700.00	14%
Davis County Totals <i>*b</i>	335000.00	100.00%
<i>*a: Estimate from Farm Service Agency records and include CRP/CREP. *b: Totals may not add due to rounding and small unknown acreages.</i>		

Special Considerations for Davis County:

- Urban growth is rapidly replacing the farmland.

Land Ownership

Prime & Unique Farm Land



Prime farmland

land that has the best combination of physical and chemical characteristics for producing food, feed, fiber, forage, oilseed, and other agricultural crops with minimum inputs of fuel, fertilizer, pesticides, and labor, and without intolerable soil erosion.

Unique farmland

Land other than prime farmland that is used for the production of specific high-value food and fiber crops...such as, citrus, tree nuts, olives, cranberries, fruits, and vegetables

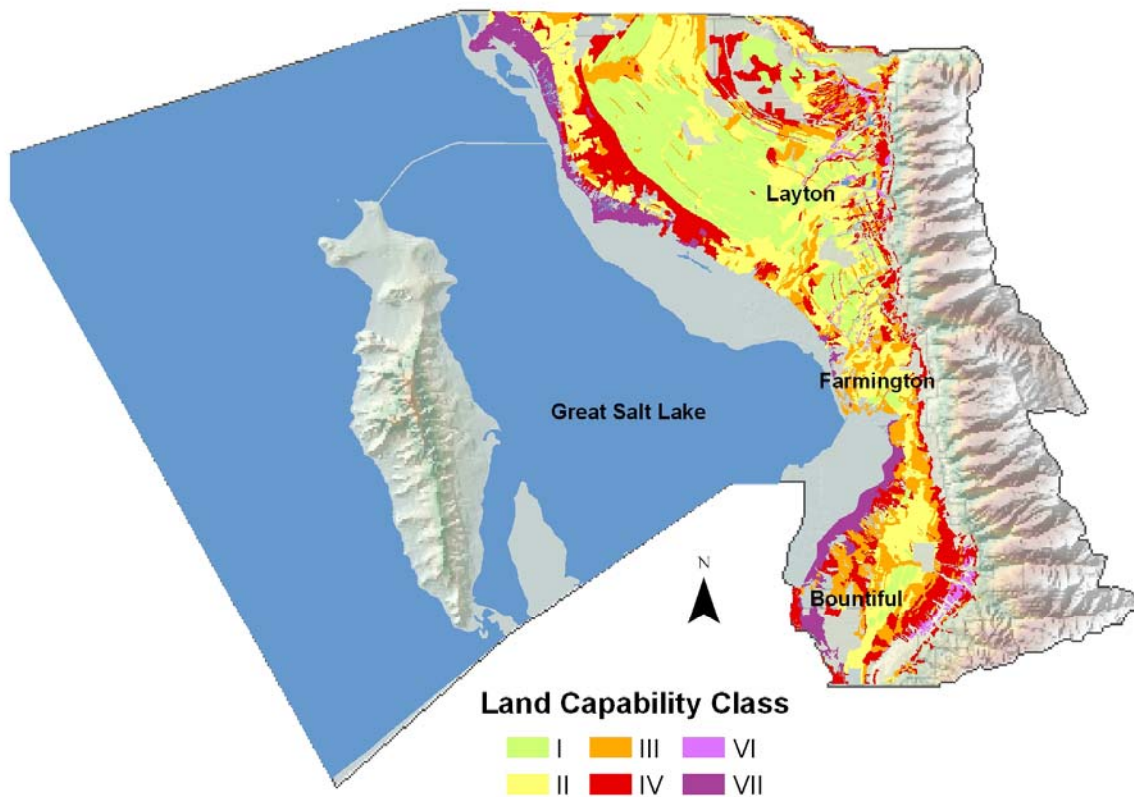
Additional farmland of statewide or local importance

Land identified by state or local agencies for agricultural use, but not of national significance

Resource Concerns – SOILS

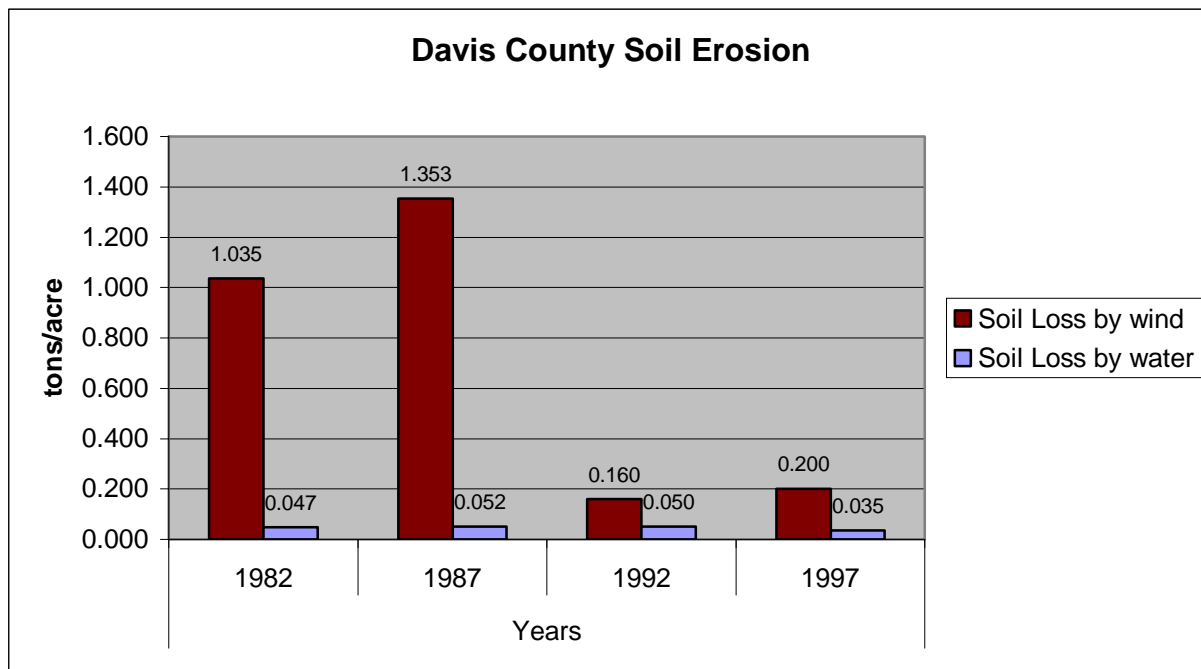
Categories	Specific Resource Concern / Issue	Crop	Hay	Pasture	Grazed Range	Grazed Forest	Pasture Native/Naturalized	Wildlife	Watershed Protection	Forest	Headquarters	Urban	Recreation	Water	Mined	Natural Area
Soil Erosion	Sheet and Rill	X			X						X	X				
	Wind	X														
	Ephemeral Gully				X											
	Classic Gully				X											
	Streambank	X	X	X	X	X								X		
	Shoreline															
	Irrigation-induced	X	X													
	Mass Movement				X											
	Road, roadsides and Construction Sites				X											
Soil Condition	Organic Matter Depletion	X			X				X							
	Rangeland Site Stability				X	X		X								
	Compaction	X			X											
	Subsidence															
	Contaminants: Salts and Other Chemicals			X												
	Contaminants: Animal Waste and Other OrganicsN	X									X					
	Contaminants: Animal Waste and Other OrganicsP	X									X					
	Contaminants: Animal Waste and Other OrganicsK	X														
	Contaminants : Commercial FertilizerN	X										X		X		
	Contaminants : Commercial FertilizerP	X												X		
	Contaminants : Commercial FertilizerK	X														
	Contaminants: Residual Pesticides	X														
	Damage from Sediment Deposition													X		

Land Capability Class on Cropland and Pastureland



		Acres	Percentage
Land Capability Class (Irrigated Cropland & Pastureland Only)	I - slight limitations	17,856	21%
	II - moderate limitations	23,024	27%
	III - severe limitations	20,567	24%
	IV - very severe limitations	15,938	19%
	V - no erosion hazard, but other limitations	0	0%
	VI - severe limitations, unsuited for cultivation, limited to pasture, range, forest	1,127	1%
	VII - very severe limitations, unsuited for cultivation, limited to grazing, forest, wildlife	5,664	7%
	VIII - misc areas have limitations, limited to recreation, wildlife, and water supply	0	0%

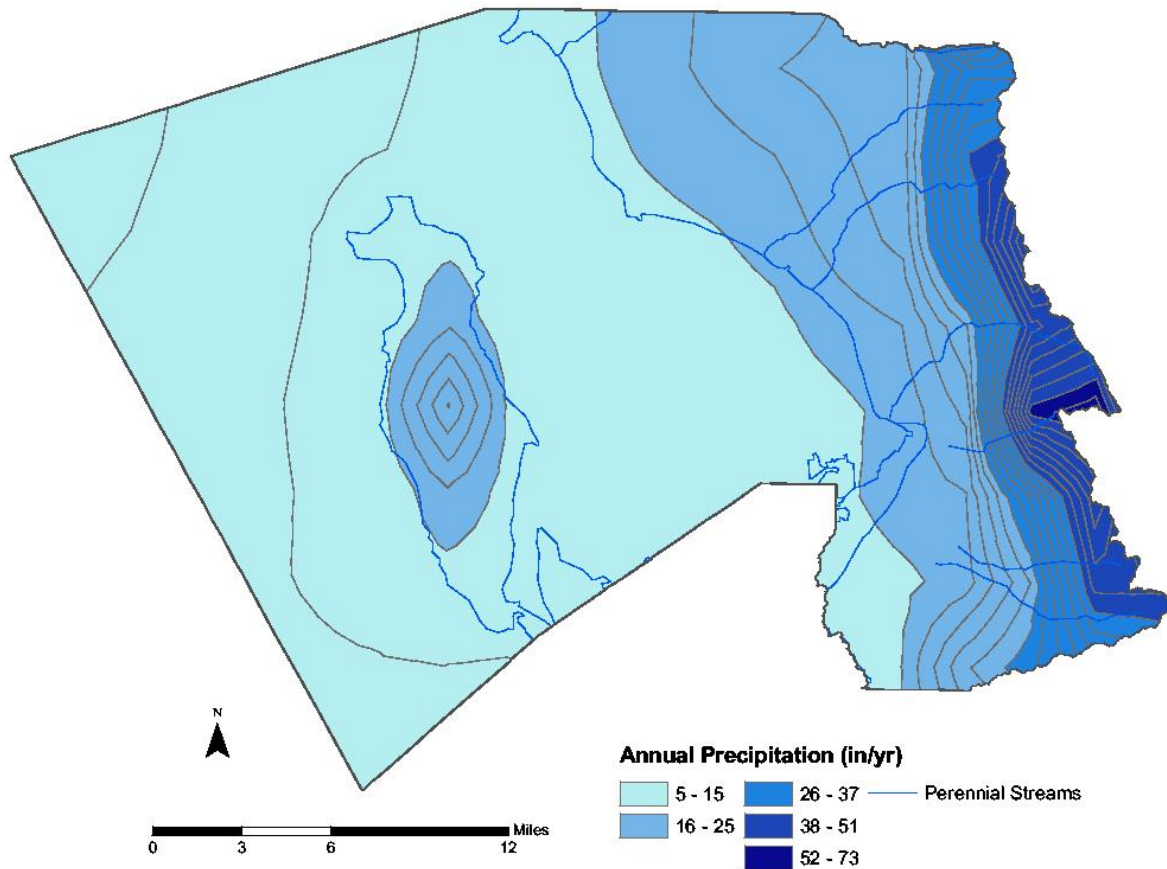
Soil Erosion on Cropland



- ❖ The bar graph shown above indicates a large reduction in soil erosion on the total acres in Davis County. However, there is approximately 9,626.6 acres of Highly Erodible Land (HEL) existing in the county. Much of the HEL acres are under a HEL conservation plan. The remaining acres still need treatment.
- ❖ The largest amount of total tons of erosion is from rangeland. Given the 15,000 acres of rangeland in poor condition and assuming two tons per acre per year reduction after treatment, equals 30,000 tons per acre per year reduction.

Resource Concerns – WATER

Categories	Specific Resource Concern / Issue	Crop	Hay	Pasture	Grazed Range	Grazed Forest	Pasture Native/Naturalized	Wildlife	Watershed Protection	Forest	Headquarters	Urban	Recreation	Water	Mined	Natural Area
Water Quantity	Water Quantity – Rangeland Hydrologic Cycle				X	X			X				X			X
	Excessive Seepage				X	X			X				X			X
	Excessive Runoff, Flooding, or Ponding				X	X			X				X			X
	Excessive Subsurface Water															
	Drifted Snow															
	Inadequate Outlets															
	Inefficient Water Use on Irrigated Land	X	X	X												
	Inefficient Water Use on Non-irrigated Land				X	X			X				X			X
	Reduced Capacity of Conveyances by Sediment Deposition															
	Reduced Storage of Water Bodies by Sediment Accumulation													X		
	Aquifer Overdraft															
	Insufficient Flows in Watercourses				X	X		X	X				X	X		X
Water Quality, Groundwater	Harmful Levels of Pesticides in Groundwater															
	Excessive Nutrients and Organics in Groundwater															
	Excessive Salinity in Groundwater															
	Harmful Levels of Heavy Metals in Groundwater															
	Harmful Levels of Pathogens in Groundwater															
	Harmful Levels of Petroleum in Groundwater															
Water Quality, Surface	Harmful Levels of Pesticides in Surface Water															
	Excessive Nutrients and Organics in Surface Water	X	X	X												
	Excessive Suspended Sediment and Turbidity in Surface Water	X	X	X												
	Excessive Salinity in Surface Water															
	Water Quality – Colorado River Excessive Salinity															
	Harmful Levels of Heavy Metals in Surface Water															
	Harmful Temperatures of Surface Water													X		
	Harmful Levels of Pathogens in Surface Water															
	Harmful Levels of Petroleum in Surface Water															

Precipitation and Streams

		ACRES	ACRE-FEET
Irrigated Adjudicated Water Rights	Surface	19275.00	
	Well	2000.00	
	Total Irrigated Adjudicated Water Rights	21275.00	0.00
Stream Flow Data	USGS 10143500 CENTERVILLE CREEK	Total Avg. Yield	2.9 cu.ft/sec
		May-Sept Yield	4.2 cu.ft/sec
		MILES	PERCENT
Stream Data	Total Miles - Major (100K Hydro GIS Layer)	615	n/a
	303d (DEQ Water Quality Limited Streams)	98	16%

		Irrigation Efficiency:		
		<40%	40 - 60%	>60%
Percentage of Total Acreage	Cropland	20%	60%	20%
	Pastureland	35%	60%	5%

Watersheds & Total Maximum Daily Load (TMDL)

Watershed Projects, Plans, Studies and Assessments			
NRCS Watershed Projects		NRCS Watershed Plans, Studies & Assessments	
Name	Status	Name	Status
DEQ TMDL's		NRCS Comprehensive Nutrient Management Plans	
Name	Status	Number	Status
		5	Planned
		4	Implemented

AFO/CAFO

Animal Feeding Operations (AFO)						
Animal Type	Dairy	Feed Lot (Cattle)	Poultry	Swine	Mink	Other
No. of Farms	0	20	0	0	0	20
No. of Animals	0	200	0	0	0	200

Potential Confined Animal Feeding Operations (PCAFO)						
Animal Type	Dairy	Feed Lot (Cattle)	Poultry	Swine	Mink	Other
No. of Farms	2	6	0	0	0	0
No. of Animals	300	60	0	0	0	0

Confined Animal Feeding Operations - Utah CAFO Permit					
Animal Type	Dairy	Feed Lot (Cattle)	Poultry	Swine	Other
No. of Permitted Farms	0	0	0	0	0
No. of Permitted Animals	0	0	0	0	0

Data for these tables was provided by the Utah Animal Feeding Operation (AFO) Strategy 2000-2002.

Resource Concerns – AIR, PLANTS, ANIMALS

Categories	Specific Resource Concern / Issue	Crop	Hay	Pasture	Grazed Range	Grazed Forest	Pasture Native/Naturalized	Wildlife	Watershed Protection	Forest	Headquarters	Urban	Recreation	Water	Mined	Natural Area
Air Quality	Particulate matter less than 10 micrometers in diameter (PM 10)															
	Particulate matter less than 2.5 micrometers in diameter (PM 2.5)															
	Excessive Ozone															
	Excessive Greenhouse Gas: CO2 (carbon dioxide)															
	Excessive Greenhouse Gas: N2O (nitrous oxide)															
	Excessive Greenhouse Gas: CH4 (methane)															
	Ammonia (NH3) (From AFO's)										X					
	Chemical Drift															
	Objectionable Odors															
	Reduced Visibility (Winter Fog)											X				
	Undesirable Air Movement (Winter Air Inversions)											X				
	Adverse Air Temperature															
Plant Suitability	Plants not adapted or suited			X	X	X		X	X				X			
Plant Condition	Plant Condition – Productivity, Health and Vigor	X	X	X	X	X		X	X		X	X	X		X	X
	Threatened or Endangered Plant Species: Plant Species Listed or Proposed for Listing under the Endangered Species Act	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Threatened or Endangered Plant Species: Declining Species, Species of Concern	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Noxious and Invasive Plants	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Forage Quality and Palatability			X	X	X		X	X							
	Plant Condition – Wildfire Hazard				X											
Fish and Wildlife	Inadequate Food	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Inadequate Cover/Shelter	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Inadequate Water	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Inadequate Space	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Habitat Fragmentation	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Imbalance Among and Within Populations	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Threatened and Endangered Species: Species Listed or Proposed for Listing under the Endangered Species Act	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Domestic Animals	Inadequate Quantities and Quality of Feed and Forage			X	X	X		X	X							
	Inadequate Shelter			X	X	X		X	X							
	Inadequate Stock Water			X	X	X		X	X							
	Stress and Mortality															

Noxious Weeds

Utah Noxious Weed List

The following weeds are officially designated and published as noxious for the State of Utah, as per the authority vested in the Commissioner of Agriculture under Section 4-17-3, Utah Noxious Weed Act:

- Bermudagrass** (*cynodon dactylon*)
- Canada thistle (*cirsium arvense*)
- Diffuse knapweed (*centaurea diffusa*)
- Dyers woad (*isatis tinctoria* L)
- Field bindweed (Wild Morning Glory) (*convolvulus arvensis*)
- Hoary cress (*cardaria drabe*)
- Johnsongrass (*sorghum halepense*)
- Leafy spurge (*euphorbia esula*)
- Medusahead (*taeniatherum caput-medusae*)
- Musk thistle (*carduus mutans*)
- Perennial pepperweed (*lepidium latifolium*)
- Perennial sorghum (*sorghum halepense* L & *sorghum alnum*)
- Purple loosestrife (*lythrum salicaria* L.)
- Quackgrass (*agropyron repens*)
- Russian knapweed (*centaurea repens*)
- Scotch thistle (*onopordum acanthium*)
- Spotted knapweed (*centaurea maculosa*)
- Squarrose knapweed (*centaurea squarrosa*)
- Yellow starthistle (*centaurea solstitialis*)

Additional noxious weeds declared by Davis County (2003): Poison Hemlock, Yellow Nutsedge, Buffalobur.

Wildlife Species of Greatest Conservation Need

The Utah Comprehensive Wildlife Conservation Strategy (CWCS) prioritizes native animal species according to conservation need. At-risk and declining species in need of conservation were identified by examining species biology and life history, populations, distribution, and threats. The following table lists species of greatest conservation concern in the county.

AT-RISK SPECIES				
	Common Name	Group	Primary Habitat	Secondary Habitat
FEDERALLY-LISTED				
Endangered:	(None)			
Threatened:	Bald Eagle (breeding)	Bird	Lowland Riparian	Agriculture
Candidate:	Yellow-billed Cuckoo	Bird	Lowland Riparian	Agriculture
Proposed:	(None)			
STATE SENSITIVE				
Conservation Agreement Species:	Columbia Spotted Frog	Amphibian	Wetland	Wet Meadow
	Least Chub	Fish	Water - Lentic	Wetland
	Bonneville Cutthroat Trout	Fish	Water - Lotic	Mountain Riparian
	Bluehead Sucker	Fish	Water - Lotic	Mountain Riparian
Species of Concern:	American White Pelican	Bird	Water - Lentic	Wetland
	Bobolink	Bird	Wet Meadow	Agriculture
	Burrowing Owl	Bird	High Desert Scrub	Grassland
	Ferruginous Hawk	Bird	Pinyon-Juniper	Shrubsteppe
	Grasshopper Sparrow	Bird	Grassland	
	Kit Fox	Mammal	High Desert Scrub	
	Lewis's Woodpecker	Bird	Ponderosa Pine	Lowland Riparian
	Long-billed Curlew	Bird	Grassland	Agriculture
	Short-eared Owl	Bird	Wetland	Grassland
	Townsend's Big-eared Bat	Mammal	Pinyon-Juniper	Mountain Shrub
	Western Pearlshell	Mollusk	Water - Lotic	Mountain Riparian
	Western Toad	Amphibian	Wetland	Mountain Riparian

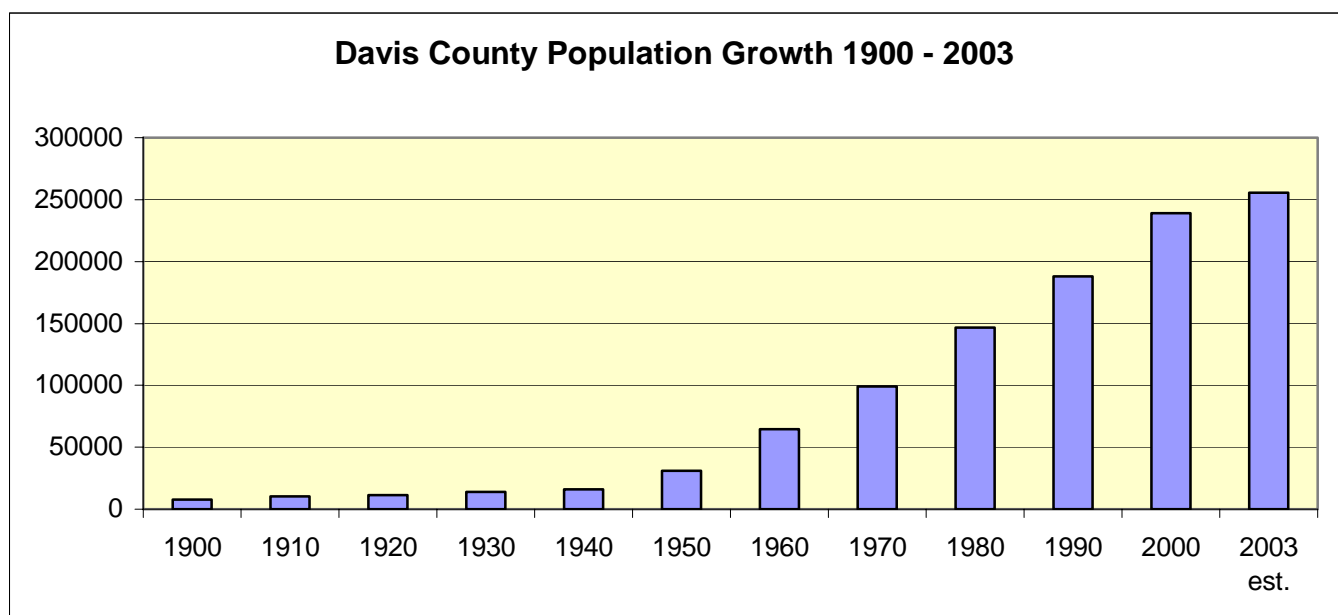
*Definitions of habitat categories can be found in the Utah Comprehensive Wildlife Conservation Strategy.

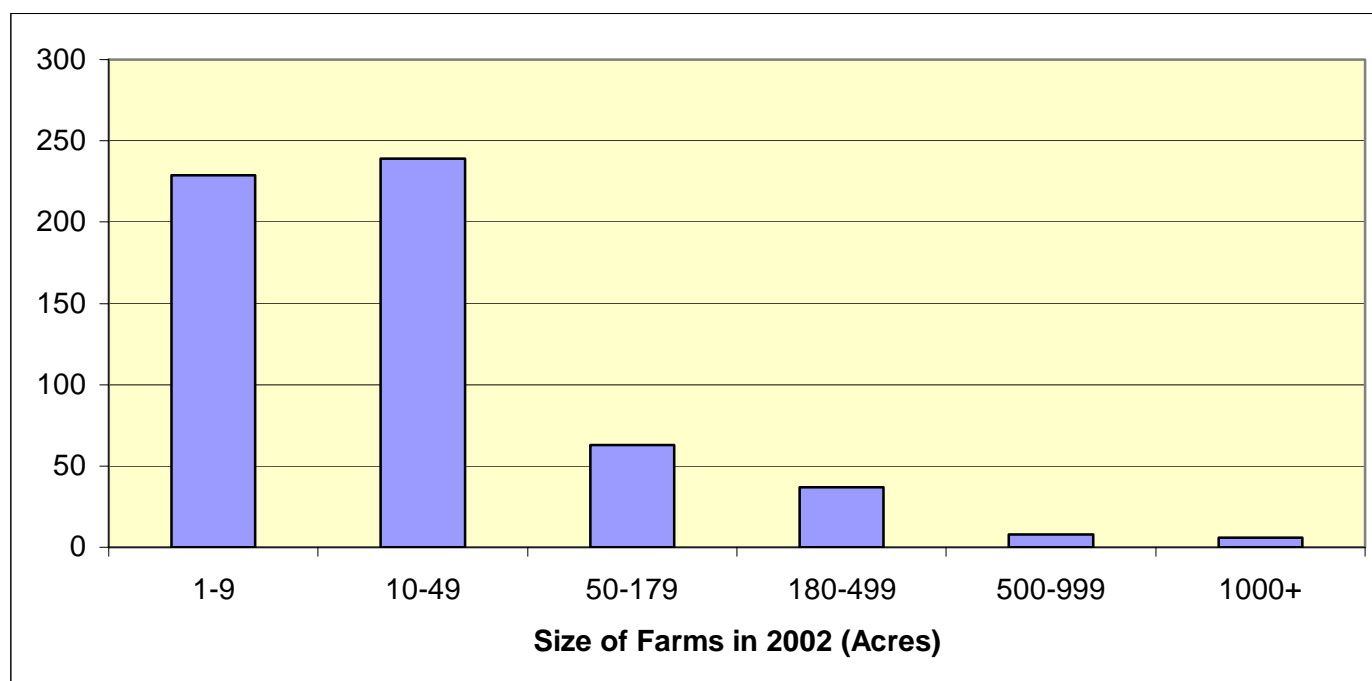
The Utah CWCS also prioritizes habitat categories based on several criteria important to the species of greatest conservation need. The top ten key habitats state-wide are (in order of priority):

1. **Lowland Riparian** (riparian areas <5,500 ft elevation; principal vegetation: Fremont cottonwood and willow)
2. **Wetland** (marsh <5,500 ft elevation; principal vegetation: cattail, bulrush, and sedge)
3. **Mountain Riparian** (riparian areas >5,500 ft elevation; principal vegetation: narrowleaf cottonwood, willow, alder, birch and dogwood)
4. **Shrubsteppe** (shrubland at 2,500 - 11,500 ft elevation; principal vegetation: sagebrush and perennial grasses)
5. **Mountain Shrub** (deciduous shrubland at 3,300 - 9,800 ft elevation; principal vegetation: mountain mahogany, cliff rose, bitterbrush, serviceberry, etc.)
6. **Water - Lotic** (open water; streams and rivers)
7. **Wet Meadow** (water saturated meadows at 3,300 - 9,800 ft elevation; principal vegetation: sedges, rushes, grasses and forbs)
8. **Grassland** (perennial and annual grasslands or herbaceous dry meadows at 2,200 - 9,000 ft elevation)
9. **Water - Lentic** (open water; lakes and reservoirs)
10. **Aspen** (deciduous aspen forest at 5,600 - 10,500 ft elevation)

Resource Concerns – SOCIAL AND ECONOMIC

Categories	Specific Resource Concern / Issue	Crop	Hay	Pasture	Grazed Range	Grazed Forest	Pasture Native/Naturalized	Wildlife	Watershed Protection	Forest	Headquarters	Urban	Recreation	Water	Mined	Natural Area
Social and Economic	Non-Traditional Landowners and Tenants	X	X	X	X	X		X	X		X	X	X	X	X	X
	Urban Encroachment on Agricultural Land	X	X	X	X	X		X	X				X			X
	Marketing of Resource Products		X													
	Innovation Needs	X	X	X	X	X		X	X	X	X	X	X	X	X	X
	Non-Traditional Land Uses															
	Population Demographics, Changes and Trends															
	Special Considerations for Land Mangement (High State and Federal Percentage)				X											
	Active Resource Groups (CRMs, etc)				X											
	Full Time vs Part Time Agricultural Communities	X	X	X	X	X		X	X							
	Size of Operating Units	X	X	X	X	X										
	Land Removed from Production through Easements															
	Land Removed from Production through USDA Programs															
Other																

Census and Social Data



Number of Farms: 582

Public Survey/Questionnaire Results:

The Davis Soil Conservation District sponsored a questionnaire in 2005 in order to gather input on the public's level of concern about natural resources. People were asked to provide input by taking an online survey, returning a paper copy of the survey, voicing their opinion at an SCD meeting, or talking directly to an SCD Board member. A news release was sent to the newspaper inviting people to take the online survey. Community and organization leaders were invited to take the survey by e-mail where possible and by regular mail when no e-mail was available. In addition, over 150 surveys were mailed to Davis County residents, mostly to people that voted in the last SCD election.

Fifty-two people responded by taking the online survey or returning the questionnaire. Thirty-seven percent of the respondents indicated that they farm or ranch, on a part-time or full-time basis. Thirty-seven percent represent local, state, or federal government. Twenty-two percent were water users and 24% were urban or suburban citizens. Respondents were free to indicate that they represented more than one group. Forty-two percent thought of themselves as agricultural producers. Most of the respondents were male Caucasians over 50 years old.

Questionnaire respondents were asked to rate the urgency of addressing 41 natural resource concerns. They chose water conservation and supply followed by air quality, open space, weeds, and water quality as the five most pressing natural resource concerns in Davis County. Over 60% of the respondents listed these as concerns that should be addressed immediately. In addition, over half thought that loss of agricultural land, agricultural sustainability, ground water, and land conversion to development concerns should also be addressed immediately. See the table below for a complete listing of the results for all the natural resources concerns.

Eighteen people provided additional comments about why they thought their natural resource concerns were critical. It would be difficult to come up with a predominant theme but nearly all comments related to the urgency of the top-rated concerns. Twenty-four people commented on the geographical areas of the County

needing the most attention. Most people felt that the fringes around the urban centers and the natural areas of the County were the priority areas to focus conservation efforts.

Respondents were also asked to rank the importance of five different roles of the Soil Conservation District. Providing technical assistance to landowners was perceived as the most important role. Scores for the different roles were:

- 142 Technical assistance to Landowners
Intermediary between Landowners and Regulatory
- 135 Agencies
- 112 Financial Assistance to Landowners
- 105 Data Collection
- 104 Natural Resources Education

It was also thought that the SCD should have roles in informing and working with local government including planning and zoning, weed control and enforcement, promoting open space, and promoting sound agriculture and agriculture protection.

Davis County Natural Resource Concerns Questionnaire	A concern that should be addressed immediately	A concern that should be addressed in the future	A minor concern or not a concern	No Opinion
Water Conservation and Supply	67%	20%	4%	10%
Air Quality	63%	22%	4%	12%
Open Space	61%	14%	16%	10%
Weeds	61%	24%	4%	12%
Water Quality	61%	24%	6%	10%
Loss of Agricultural Land	57%	18%	14%	12%
Agricultural Sustainability	55%	18%	16%	12%
Groundwater	55%	25%	10%	10%
Land Conversion to Development	55%	22%	8%	16%
Energy Conservation and Supply	47%	27%	6%	20%
Surface Water	45%	25%	16%	14%
Irrigation Water Management	45%	31%	10%	14%
Urban Water Pollution	45%	33%	10%	12%
Invasive Species	43%	25%	16%	16%
Urban Land Use	43%	27%	12%	18%
Recreation	41%	29%	14%	16%
Rural Land Use	41%	27%	12%	20%
Wildfire	41%	24%	16%	20%
Landslides	39%	25%	18%	18%
Riparian Corridors (waterways)	39%	29%	10%	22%
Flooding	37%	33%	40%	10%
Wetlands	37%	22%	25%	16%
Food and Fiber Production	35%	29%	18%	18%
Forest Health	33%	29%	22%	16%
Landfills and Waste Disposal	33%	39%	12%	16%
Fish and Wildlife Habitat	31%	39%	14%	16%
Fish and Wildlife Populations	31%	43%	8%	18%
Small-Acreage Management	29%	27%	22%	22%
Soil Erosion	29%	35%	18%	18%
Grazing Lands	27%	24%	27%	22%
Rangeland Health	25%	27%	24%	24%
Pesticide Management	25%	35%	22%	18%
Public Land Management	25%	35%	18%	22%
Soil Quality/Soil Health	24%	39%	20%	20%
Manure Management	20%	25%	31%	24%
Nutrient/Fertilizer Management	20%	29%	29%	22%
Timber Production	20%	22%	33%	25%
Threatened/Endangered or State-Sensitive Species	20%	24%	31%	25%
Biological Diversity	18%	33%	22%	27%
Mined Land Reclamation	14%	20%	35%	31%
Cultural Resources	12%	31%	31%	25%

* The complete survey will be posted at <http://www.uacd.org/>

Footnotes / Bibliography

1. General information about Davis County obtained from the official Davis County website:
<http://www.co.davis.ut.us/discoverdavis/>
2. Location and land ownership maps made using GIS shape files from the Automated Geographical Reference Center (AGRC), a Utah State Division of Information Technology. Website: <http://agrc.utah.gov/>
3. Land Use/Land Cover layer developed by the Utah Department of Water Resources. A polygon coverage containing water-related land-use for all 2003 agricultural areas of the state of Utah. Compiled from initial USGS 7.5 minute Digital Raster Graphic water bodies, individual farming fields and associated areas are digitized from Digital Orthophotos, then surveyed for their land use, crop type, irrigation method, and associated attributes.
4. Prime and Unique farmlands derived from SURGO Soils Survey UT607 and Soil Data Viewer. Definitions of Prime and Unique farmlands from U.S. Geological Survey, http://water.usgs.gov/eap/env_guide/farmland.html#HDR5
5. Land Capability Classes derived from SURGO Soils Survey UT607 and Soil Data Viewer.
6. Tons of Soil Loss by Water Erosion data gathered from National Resource Inventory (NRI) data. Estimates from the 1997 NRI Database (revised December 2000) replace all previous reports and estimates. Comparisons made using data published for the 1982, 1987, or 1992 NRI may produce erroneous results. This is due to changes in statistical estimation protocols, and because all data collected prior to 1997 were simultaneously reviewed (edited) as 1997 NRI data were collected. In addition, this December 2000 revision of the 1997 NRI data updates information released in December 1999 and corrects a computer error disc covered in March 2000. For more information: <http://www.nrcs.usda.gov/technical/NRI/>
7. Irrigated Adjudicated Water Rights obtained from the Utah Division of Water Rights.
8. Stream Flow data from USGS-Utah website.
9. Stream length data calculated using ArcMap and 100k stream data from AGRC and 303d waters from the Utah Department of Environmental Quality.
10. The 2003 noxious weed list was obtained from the State of Utah Department of Food and Agriculture. For more information contact Steve Burningham, 801-538-7181 or visit their website at http://ag.utah.gov/plantind/noxious_weeds.html
11. Wildlife information derived from the Utah Division of Wildlife Resources' Comprehensive Wildlife Conservation Strategy (CWCS) (<http://wildlife.utah.gov/cwcs/>) and from the Utah Conservation Data Center (<http://dwrcdc.nr.utah.gov/ucdc/>).
12. County population data from the U.S. Census Bureau, Utah Quick Facts, <http://quickfacts.census.gov/qfd/states/49000.html>
13. Farm information obtained from the National Agricultural Statistics Service, 2002 Census of Agriculture. <http://www.nass.usda.gov/census/census02/volume1/index2.htm>
14. Utah Animal Feeding Operation (AFO) information was obtained from "Utah! Animal Feeding Operation Strategy: five Years of Progress 1999-2004".